

## WHAT IS CLAIMED IS:

1. An authentication information communication system made up of a portable information processing device executing the communication through a human body, and a service furnishing device, wherein said portable information processing device includes

a contact point A contacting the human body to establish a communication path through said human body;

fixed data storage means for memorizing fixed user identification data capable of identifying a user;

variable data storage means for holding variable user identification data corresponding to a service furnished by said service furnishing device; and

outputting means for outputting at least authentication data which is based on said variable user identification data; and wherein said service furnishing device includes

a contact point B contacting the human body to establish a communication path through said human body; and

control means for controlling service execution based on the results of the authentication processing which is based on said authentication data.

2. The authentication information communication system according to claim 1 wherein said portable information processing device includes

synthesizing means for synthesizing fixed user identification data stored in said

fixed data storage means and variable user identification data stored in said variable data storage means;

    said synthesizing means generating authentication data which is based on said fixed user identification data and said variable user identification data.

3. The authentication information communication system according to claim 1 wherein said service furnishing device includes

    authentication means for executing authentication processing which is based on said authentication data transferred from said portable information processing device through said contact points A and B;

    said control means controlling service execution based on the results of authentication processing by said authentication means.

4. The authentication information communication system according to claim 1 wherein said service furnishing device includes

    service identifier holding means for holding a service identifier corresponding to a service to be furnished; and wherein said portable information processing device is configured for storing said variable user identification data in said variable data storage means in association with said service identifier;

    corresponding variable user identification data being extracted from said variable data storage means based on said service identifier received from said service furnishing device through said contact points A and B to output the authentication data which is based on the extracted variable user identification data.

5. The authentication information communication system according to claim 1 wherein said service furnishing device includes

means for generating user identification data for authentication corresponding to a service to be furnished; and wherein

said portable information processing device is configured for receiving user identification data for authentication generated by said means adapted for generating user identification data for authentication from said service furnishing device through said contact points A and B for storage as variable user identification data in said variable user identification data storage means.

6. The authentication information communication system according to claim 1 further comprising:

user management means for executing authentication processing for a user; said user management means having a registration table having registered therein the user registration state and the service use state from one registered user to another, said user management means being configured for executing the authentication processing based on said registration table.

7. The authentication information communication system according to claim 1 further comprising:

service registration means for registering a service furnished to the user; said service registration means including means for generating user identification data for authentication corresponding to a service to be furnished by said service furnishing

device; said portable information processing device being configured for storing the user identification data for authentication generated by said service registration means in said variable user identification data storage means as variable user identification data.

8. The authentication information communication system according to claim 1 wherein said variable user identification data includes the information for setting the service mode of a service furnished by said service furnishing device.

9. A portable information processing device for executing communication with a service furnishing device through a human body, said portable information processing device comprising:

a contact point A contacting the human body to establish a communication path through said human body;

fixed data storage means for memorizing fixed user identification data capable of identifying a user;

variable data storage means for holding variable user identification data corresponding to a service furnished by said service furnishing device; and

outputting means for outputting at least authentication data which is based on said variable user identification data.

10. The portable information processing device according to claim 9 comprising:

synthesizing means for synthesizing fixed user identification data stored in said fixed data storage means and variable user identification data stored in said variable

data storage means;

    said synthesizing means generating authentication data which is based on said fixed user identification data and said variable user identification data.

11. The portable information processing device according to claim 9 in which said variable user identification data is stored in said variable data storage means in association with a service identifier; wherein

    corresponding variable user identification data is extracted from said variable data storage means, based on the service identifier received from said service furnishing device to output the data for authentication which is based on the extracted variable user identification data.

12. The portable information processing device according to claim 9 wherein said variable user identification data includes the mode setting information for the service furnished by said service furnishing device.

13. The portable information processing device according to claim 9 wherein said contact point A is curved in profile to follow the mounting side of the human body.

14. The portable information processing device according to claim 9 adapted for being mounted on one of a finger, an arm, a neck, a leg, a foot or a head of the user.

15. The portable information processing device according to claim 9 enclosed in any of a wrist-watch, a necklace, a ring, a hair band or a bracelet.

16. The portable information processing device according to claim 9 wherein said fixed data storage means and the variable data storage means are removable with

respect to the portable information processing device.

17. A method for authentication information communication executed by a portable information processing device including a contact point A adapted for establishing a communication path through a human body on having contact therewith and a service furnishing device including a contact point B adapted for establishing a communication path through a human body on having contact therewith, said method comprising:

a step of transmitting service identification data from said service furnishing device to said portable information processing device through said contacts B and A;

a step of extracting variable user identification data corresponding to said service identification data from said variable user identification data storage means in said portable information processing device;

a step of generating data for authentication based on the variable user identification data as extracted;

a step of outputting said data for authentication from said portable information processing device to said service furnishing device through said contact points A and B; and

a step of controlling service execution in said service furnishing device based on the results of authentication processing for said data for authentication.

18. The method for authentication information communication according to claim 17 wherein said step of generating said data for authentication includes a step of

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synthesizing said variable user identification data and said fixed user identification data.

19. The method for authentication information communication according to claim 17 wherein said service furnishing device executes the step of authentication processing executing the authentication processing based on said data for authentication transmitted from said portable information processing device through said contact points A and B;

    said control step controlling the service execution based on the result of authentication processing of said authentication processing step.

20. The method for authentication information communication according to claim 17 wherein said service furnishing device includes

    a step of generating user identification data for authentication corresponding to a service to be furnished;

    said portable information processing device receiving user identification data for authentication generated in said step of generating the user identification data for authentication, from said service furnishing device through said contacts B and A, and for storing the so-received data in said variable user identification data storage means as variable user identification data.

21. The method for authentication information communication according to claim 17 further comprising:

    a user management step of executing authentication processing for a user; said

user management step including a step of generating a registration table having registered therein the user registration state and the service using state from one registered user to another;

    said authentication processing being carried out based on said registration table.

22. The method for authentication information communication according to claim 17 further comprising:

    a step of registering a service to be furnished to a user;

    said service registration step including a step of generating user identification data for authentication corresponding to a service furnished by said service furnishing device;

    said portable information processing device having a step of storing the user identification data for authentication generated in said service registration step in said variable user identification data storage means as variable user identification data.

23. In a system for authentication information communication executed by a portable information processing device having a contact point A adapted for establishing a communication path through a human body on having contact therewith and a service furnishing device having a contact point B adapted for establishing a communication path through a human body on having contact therewith, a program furnishing medium for tangibly furnishing a computer program which causes a processing executed on a service furnishing device to be executed on a computer system, said computer program comprising:

a step of outputting service identification data from said service furnishing device through said contact point B to said portable information processing device;

a step of receiving data for authentication generated by said portable information processing device based on the variable user identification data corresponding to said service identification data through said contact point B; and

a step of controlling the service execution based on the result of authentication processing for said data for authentication.

24. In a system for authentication information communication executed by a portable information processing device having a contact point A adapted for establishing a communication path through a human body on having contact therewith and a service furnishing device having a contact point B adapted for establishing a communication path through a human body on having contact therewith, a program furnishing medium for tangibly furnishing a computer program which causes a processing executed on a service furnishing device to be executed on a computer system, said computer program comprising:

a step of receiving service identification data output from said service furnishing device to said portable information processing device through said contact point A;

a step of extracting variable user identification data corresponding to said service identification data from said variable user identification data storage means;

a step of generating data for authentication based on the variable user identification data as extracted; and

a step of outputting said data for authentication from said portable information processing device to said service furnishing device through said contact point A.

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